

REMARKS

Claims 1-30 are pending in this application. By this Amendment, the specification and claim 28 are amended. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attachment is captioned **"Version with markings to show changes made."**

The Office Action objects to the drawings because Figs. 1, 3 and 5 should be indicated as being prior art. However, applicant has not stated anywhere in the specification that these figures are prior art. Additionally, the Office Action does not provide any specific reason why these figures are prior art. Therefore, applicant has not amended the figures as suggested.

The Office Action objects to the disclosure and claim 28 because of informalities. The above amendments to claim 28 and the specification obviates the grounds for objection. Withdrawal of the objections are respectfully requested.

The Office Action rejects claims 1-30 under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the specification to enable one skilled in the art to make and/or use the invention. The rejection is respectfully traversed.

The Office Action asserts that the method or approach as to how a second node address is discovered or presented in relation to a destination address connected to the second node is not disclosed in the disclosure. The Office Action also indicates that it is not well-known in the art. Applicants respectfully disagree with these assertions.

It is well known that routers may include a high level of intelligence to allow the router to consider the network as a whole and to route data packets based on information such as traffic and destination addresses.

Independent claim 1 recites modifying the IP header so that the destination address of the IP header contains a second node address indicating a location of the second node. It is well understood that the network and thus the routers have the ability to “know” or determine the addresses of respective nodes such as routers.

Independent claim 1 recites that the IP header is modified so that a destination address of the header field contains a second node address indicative of the second node. Embodiments of the present invention relate to modifying an IP header so as to have a new destination address (i.e., the address of the second node) in the destination field. These actions of modifying may be performed by the router as discussed in the present application. See, for example, page 14, lines 5-10 and page 14, line 22 - page 15, line 9 in the present specification.

Fig. 3 shows one example of the format of a Type 0 routing header according to IPv6. See also Figs. 7 and 12 showing other routing headers. As shown with respect to Fig. 3, the routing header may include address fields 302-1 to 302-n that contain a sequence of addresses of nodes to which the packet is to be routed, including the address of the destination node/device. For example, the address of the second node may be provided within one of the address fields. This may be clearly seen in Fig. 12 that shows address fields 302-1 and 302-2 as being part of a path of a respective packet through the network. See also page 2, lines 12-14 and page 4, lines 4-6 of the present specification. Accordingly, one skilled in the art will

clearly understand how to make and/or use the features recited in each of claims.

One skilled in the art would know (from the present specification) how to modify, at a first node, the IP header of a full header packet of the stream of packets so that a destination address field of the IP header contains a second node address indicating a location of the second node. That is, one skilled in the art would clearly understand that the network, and thus the router, are capable of determining addresses of other nodes to which a packet will be sent. Claim 1 relates to modifying the destination address so as to include a node address of a second node. For at least the reasons set forth above, it is respectfully submitted that the specification adequately enables one skilled in the art to make and/or use the invention as set forth in claim 1 and each of the other claims. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

The Office Action also rejects claims 1-30 under 35 U.S.C. 112, second paragraph. The rejection is respectfully traversed.

The Office Action asserts that the second node address identification method is unclear and vague. However, applicants have not claimed an address identification method. Rather, claim 1, for example, recites modifying the IP header so that a destination address field contains a second node address indicating a location of the second node. That is, the claim language clearly sets forth, in a definite manner, that the IP header is modified so that a destination address field contains a specific address. This is not an address identification method as set forth in the Office Action. Accordingly, applicants believe that this feature, set forth in claim 1 and similarly recited in subsequent claims, is definite. Withdrawal of the

rejection of claims 1-30 under 35 U.S.C. §112, second paragraph, is respectfully requested.

The Office Action also rejects claims 5, 9, 16, 20 and 26 under 35 U.S.C. §112, second paragraph. The rejection is respectfully traversed.

The Office Action asserts that information on a header having unpredictable header information is unclear and indefinite. However, this terminology is well known to those skilled in the art and therefore the terminology is proper and definite under 35 U.S.C. §112, second paragraph. More specifically, the cited document of Degermark, IP Header Compression, RFC 2507, on page 22, lines 14 and 15 relates to “unpredictability” when discussing that the RANDOM field must be included “as is” in compressed headers, usually because it changes unpredictably. The use of the terminology “unpredictable” is also clearly set forth in the specification, which provides adequate support to one skilled in the art. See page 5, lines 1-5; page 9, lines 1-4; page 12, lines 8-11; page 17, lines 9-12; and page 22, lines 5-9 of the present specification. It is respectfully submitted that one skilled in the art (from reading the specification’s use of this terminology and from the knowledge of one skilled in the art as set forth in RFC 2507 to Degermark), that the use of the terminology “unpredictable” is clear and definite. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

The Office Action rejects claims 1-30 under 35 U.S.C. §103(a) over U.S. Patent 6,272,148 to Takagi et al. (hereafter Takagi) in view of RFC 2507 to Degermark et al., entitled IP Header Compression (hereafter Degermark). The rejection is respectfully traversed.

The present application relates to initiating compression of IP headers of a stream of packets to be sent from a source address to a destination address. This may be accomplished by changing the destination address of the IP header to identify the address of a node and passing the Context Identifier (CID) and Generation Fields in a routing header that follows or is inserted to follow the IP header of the full header packet. See page 11, line 19 - page 12, line 5 and page 6, line 22 - page 7, line 4 of the present specification.

Independent claim 1 recites modifying, at the first node, the IP header of a full header packet of the stream of packets so that a destination address field of the IP header contains a second node address indicating a location of the second node. Independent claim 1 further recites inserting, at the first node, a routing header in the full header packet of the stream of packets, the routing header having Context identification (CID) information identifying information of the IP header and a destination address indicating a location of the destination apparatus. Independent claim 1 further recites initiating header compression of IP headers of packets of the stream of packets subsequent to the full header packet, when the second node receives the full header packet including the modified IP header and the inserted routing header.

The applied references do not teach or suggest at least these features of independent claim 1. In particular, the applied references do not teach or suggest the modification of the IP header so that a destination address field of the IP header contains a second node address, inserting a routing header having Context Identification (CID) information identifying information of the IP header and a

destination address indicating a location of the destination apparatus in combination with initiating header compression when the second node receives the full header packet including the modified IP header and the inserted routing header.

The Office Action appears to assert that Takagi discloses most of the claimed features of independent claim 1. The Office Action specifically references Takagi's col. 25, lines 30-38; col. 26, lines 1-10; and Fig. 4. However, these sections of Takagi clearly do not relate to the alleged features. That is, Takagi does not modify an IP header of a full header packet so that a destination address field of the IP header contains a second node address. In rejecting these features, the Office Action points to Takagi's col. 25 and col. 26. However, in reviewing these sections of Takagi, there is no suggestion for modifying the destination address field of an IP header to contain a second node address. This section of Takagi merely relates to the header having an IP address of the router as a destination and includes an address of a radio terminal is described as a destination in the header of an encapsulated datagram. This is not the modification of an IP header so that a destination address field contains a second node address. Furthermore, there is no discussion of modifying the IP header as set forth in independent claim 1.

The Office Action also asserts that Takagi discloses transmitting the full header packet including the modified IP header and the inserted routing header. However, Takagi does not relate to an inserted routing header (as acknowledged by the Office Action and as discussed below). Therefore, Takagi does not transmit the full header packet including the modified IP header and the inserted routing header.

Takagi does not include an inserted routing header and therefore cannot transmit an inserted routing header.

The Office Action continues by stating that Takagi does not disclose inserting or modifying a routing header in the full header packet of the stream of packets, including Context Identification (CID) information identifying information of the IP header and a destination address indicating a location of the destination address. The Office Action asserts that Takagi discloses inserting or modifying a link header on a higher layer being encapsulated, which provides motivation to include a routing header specifically including CID information as disclosed in Degermark. However, this motivation to combine the two references is clearly improper. That is, independent claim 1 recites unique features regarding the IP header and the routing header. The Office Action uses the present specification (including the claims) to state that it would be proper to modify Takagi's alleged link header to include CID information. There is no motivation for this modification. While applicant agrees that Degermark relates to CID information, there is no suggestion in the prior art of combining Degermark's CID feature with Takagi as alleged. Applicants also note that Degermark was specifically considered when drafting the present application as may be seen in the discussion on page 4, line 16 to page 6, line 19 of the present specification. That is, the present application was specifically drafted knowing the features of Degermark and its disclosure of CID information. As stated above, embodiments of the present invention relate to changing the destination address of an IP header of a full header packet to identify the address of a node, and passing Context Identifier and generation field in a routing header which follows or is inserted

to follow the IP header. The combination of Degermark and Takagi does not relate to these features. As such, independent claim 1 defines patentable subject matter.

Each of independent claims 12 and 23 define patentable subject matter for at least similar reasons as claim 1. Claims 2-11 depend from claim 1, claims 13-22 depend from claim 12, and claims 24-30 depend from claim 23 and therefore define patentable subject matter at least for this reason.

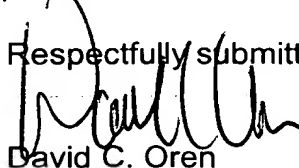
In addition, the dependent claims recite features that further and independently distinguish over the applied references. In view of the above distinguishing differences between Takagi/Degermark and the present application, applicant has not specifically addressed each of the dependent claims as is believed that the outstanding rejection will be withdrawn based on these arguments.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-30 are respectfully requested.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (referencing case No. 730.37246X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



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Version with markings to show changes made

IN THE SPECIFICATION:

The paragraph beginning on page 16, line 17 has been amended as follows:

--The [second] first router 1302 sends the full header packet including the modified IP header 403 and the inserted routing header 404 to the second router 1303. The second router 1303 upon receipt of the full header packet including the modified IP header 403 and the inserted routing header 404 creates a context related to the packet stream to which the full header packet belongs or refreshes a previously stored context corresponding to the packet stream to which the full header belongs. The second router 1303 creates a context by storing information of the IP header 403 for later use in corresponding relation to CID1 stored in the CID field 701 of the routing header 404. The second router 1303 refreshes the context by updating values and information of the previously stored IP header with the values and information provided by the IP header 403 of the full header packet.--

IN THE CLAIMS:

Claim 28 has been amended as follows:

28. (Amended) A router according to claim 27, further comprising:
eighth apparatus which compresses the IP headers of each of the subsequent packets when the IP header compression has been initiated.